

Title (en)

Micro flow filtration system and integrated microfluidic device

Title (de)

Mikroflussfiltrationssystem und integrierte mikrofluidische Vorrichtung

Title (fr)

Système de filtration à micro-écoulement et dispositif microfluidique intégré

Publication

EP 2645078 A1 20131002 (EN)

Application

EP 12162011 A 20120329

Priority

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Abstract (en)

A micro fluid filtration system (100) preferably for increasing the concentration of components contained in a fluid sample has a fluid circuitry (1). The fluid circuitry (1) comprises the following elements: A tangential flow filtration element (7) capable for separating the fluid sample into a retentate stream and a permeate stream upon passage of the fluid, an element for pumping (3) for creating and driving a fluid flow through the fluid circuitry (1) and at least one element for obtaining information about the properties of the fluid sample within the circuitry. The circuitry further comprises a plurality of conduits (24) connecting the elements of the fluid circuitry (1) through which a fluid stream of the fluid sample is conducted. The circuitry (1) has a minimal working volume of at most 5 ml, which is the minimal fluid volume retained in the elements and the conduits (24) of the circuitry (1) such that the fluid can be recirculated in the circuitry (1) without pumping air through the circuitry (1). An integrated micro fluidic device (20) of the circuitry (1) contains the functionality of at least two elements of the group of elements of the circuitry (1).

IPC 8 full level

G01N 1/40 (2006.01); **B01D 63/00** (2006.01); **B01D 63/08** (2006.01); **B01L 3/00** (2006.01)

CPC (source: EP US)

B01D 61/147 (2013.01 - US); **B01D 61/22** (2013.01 - US); **B01D 63/005** (2013.01 - US); **B01D 63/087** (2013.01 - EP US); **B01D 63/088** (2013.01 - EP US); **B01L 3/502715** (2013.01 - EP US); **B01L 3/502753** (2013.01 - EP US); **B29C 45/14** (2013.01 - US); **B29C 70/72** (2013.01 - US); **F16B 33/004** (2013.01 - US); **F16B 33/006** (2013.01 - US); **F16B 35/00** (2013.01 - US); **B01D 2311/14** (2013.01 - EP US); **B01D 2311/246** (2013.01 - EP US); **B01D 2311/25** (2013.01 - EP US); **B01D 2313/60** (2022.08 - EP US); **B01D 2315/10** (2013.01 - EP US); **B01L 2200/0647** (2013.01 - EP US); **B01L 2200/146** (2013.01 - EP US); **B01L 2300/0627** (2013.01 - EP US); **B01L 2300/0681** (2013.01 - EP US); **B01L 2300/0816** (2013.01 - EP US); **B01L 2300/0864** (2013.01 - EP US); **B01L 2300/088** (2013.01 - EP US); **B01L 2400/0478** (2013.01 - EP US); **B01L 2400/0487** (2013.01 - EP US); **B29K 2105/08** (2013.01 - US); **B29L 2031/727** (2013.01 - US); **G01N 2001/4088** (2013.01 - EP US); **Y10T 403/473** (2015.01 - EP US)

Citation (applicant)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 12162011 A 20120329; CN 201380018097 A 20130325; EP 13711703 A 20130325; EP 2013056294 W 20130325; JP 2015502279 A 20130325; SG 11201405933R A 20130325; US 201314386085 A 20130325; US 201815962700 A 20180425